

# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : **HITACHI KOKUSAI  
ELECTRIC INC**

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(72)Inventor : **AKIYAMA TOSHIYUKI**  
**TSUKAMOTO NOBUO**

**(54) TRANSMISSION APPARATUS OF ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING MODULATION SYSTEM**

(57)Abstract:

**PROBLEM TO BE SOLVED:** To achieve a compact and low-price transmission apparatus that can make nearly half the size of a carrier direction insertion circuit, and can obtain the same performance as the case using a complex filter.

**SOLUTION:** In the transmission apparatus using an OFDM system, the reception apparatus of the transmission apparatus comprises an FFT circuit for allowing a signal row that is cut for each specific signal length from a reception signal to be subjected to discrete Fourier transform successively, an FFT input signal cyclic circuit for changing signal order in the cut signal row cyclically for outputting to the FFT circuit successively, a circuit for extracting a specific pilot signal from the FFT circuit output to carry out insertion operation and reproducing a reference signal vector, and a demodulation circuit for demodulating the FFT circuit output based on the reproduced reference signal vector.

